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49. *Telmatodytes palustris iliacus*. Prairie Marsh Wren. Nests commonly in the reeds growing in the ends of the larger ponds.

50. *Planesticus migratorius migratorius*. Robin. Common. Builds in the groves and about the houses.

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## NOTES ON THE SPOTTED SANDPIPER.

BY ARTHUR F. SMITH.

During the summer of 1913 the writer was privileged to be present at the session of the Iowa Lakeside Laboratory, on Lake Okoboji, Iowa. There are many opportunities here for the intensive study of the life and behavior of birds, and such work is encouraged by the Laboratory.

In the summer of 1913 two nests of the Spotted Sandpiper (*Actitis macularius*) were found, and at the suggestion of Dr. T. C. Stephens the writer followed their history somewhat carefully. Both of the nests were located similarly, viz., near the extremity of long, low sand spits projecting into the lake for a distance of two hundred yards or more. In each case the nest was about seventy-five feet from the point. The nests, which were located on Gull Point and the Sand Spit in Miller's Bay respectively, may now be considered separately.

The nest on Gull Point was found on Friday, June 27, at 5:30 P. M. At this time it contained four eggs. The ground at this point was sandy, covered by a sparse growth of fox-tail grass and a few weeds. The neck of land here was not over thirty or forty feet in width, and was quite low. The nest was afforded very little concealment among the short, dry grass; but, nevertheless, the nest itself is so inconspicuous that it is seen with difficulty even at close range. It was noted that when the parent bird was on the nest her colors harmonized quite perfectly with the surrounding vegetation and ground. The eggs also presented little or no contrast with the environs of the nest.

Visits were made to this nest on June 29, July 1, 5, 7, 8, 10, and 13, and on each occasion one of the parents was

flushed from the nest. At each of these visits the bird, when flushed, flew to some distance; however, when the eggs began to hatch this distance became greatly shortened.

About 7:30 P. M. on the 14th of July the first egg was found to be hatching. The shell was roughly broken across the large end for a distance of about three-fourths of an inch, and from one end of this jagged opening there extended a clean crack pretty nearly to the small end of the egg.

Close examination now revealed that two other eggs were pipped. In both cases there was a little round hole just large enough to permit the protrusion of the tip of the chick's beak. In all three the beak of the chick kept at work crumbling away the edge of the shell and membrane.

The old bird was now very tame, and at no time was she more than a few yards away. She displayed great curiosity, or anxiety, slipping in and out between the grass, and eyed the intruder from one side and then the other.

I then withdrew to a point about twenty feet away in order to allow her to return to the nest. This she did immediately, but something must have frightened her again, for she jumped about four feet straight into the air. I now gradually approached the nest, repeatedly flushing the bird and waiting for her return; when I got within five feet of the nest the old bird left, only to return at once, calling and receiving answering chirps from the partly hatched young. Finally, I got within three feet of the nest; the old bird simply stood up on the piece of bark by the nest, looked interested, and returned to the nest.

The old bird covered the nest by spreading the wings slightly, and fluffing the breast feathers.

As I crept a little closer the old bird flushed, and I saw that the first young bird had emerged from the shell. At 8:30 P. M. I left. The nest contained at this time one chick, two pipped eggs, one entire, and one empty shell.

*July 15.* When I returned to the nest at 4:30 A. M. the old bird was on the nest, but flushed at my approach. The nest now contained four young birds and three empty shells. Evidently one shell had been disposed of, and probably the

night before. One of the chicks left the nest with vigorous chirps, and joined the mother near by. One other chick, though not yet dry, was endeavoring also to leave the nest.

As I lay within two and a half feet of the nest, the old bird came and pecked at an egg shell, and then sat down. Two of the chicks climbed onto the mother's back.

I was able to distinguish two calls of the adult birds. One might be called the *alarm note*, which gives warning to the young of danger; it is simply a repetition of a single note, thus: "Peet-peet-peet-peet," etc. The other might be called a song, for the parent sings it as she coddles the young. It runs thus: "Tr-tr-tr weet, tr-tr-tr weet, tweet, tweet, tweet, tr-tr-tr."

One of the first acts of the old bird was to pick up one of the half shells and carry it to the water's edge, where it was dropped. A little later she bit off some pieces from the small part of the shell and swallowed them. At 5:30 A.M. she carried off the second half shell and dropped it at the lake shore as before. At 6:00 A.M. she cleaned out the nest, eating a number of small bits of shell, some of which she obtained by scatching in the grass; the last large piece of shell was carried to the shore as before, but this time she held it under the water and shook it. The shell was then eaten, thus departing somewhat from the previous conduct.

At 6:10 A.M., when the old bird returned, two of the young were about twenty feet away in the grass. Up to this time a close watch had been kept as to the feeding of the young birds. The parent was not observed to bring any food to the nest. But now the two little chicks which had left the nest were observed to pick at the grass as if in the act of catching insects. And with continued observation I concluded they were feeding, all of which the old bird watched attentively. On one occasion a garter snake came to the vicinity of the nest, but was warded away from the direction of the young birds by the vigorous wing action of the parent.

On the 17th the place was again visited for the purpose of photographing the young. Two were found and photographed; the other two were seen to run off in the grass, but

were not caught. The old bird seemed to divide her attention between these two pairs of chicks.

Some summer cottagers living near by said they had been in the habit of feeding these sandpipers (what I do not know), and they stated that the chicks usually appeared in pairs. Just why the chicks should leave the nest in pairs



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I am not at present able to say, except that a suggestion is found in the study of the next nest.

The nest on the Sandspit in Miller's Bay was found on June 27, and contained four eggs. It was visited daily and on the evening of July 12 the four eggs were intact. At 1:30 P.M. on the 13th there were two chicks and two eggs. At 3:20 P.M. the third egg was pipped, with the chick's bill protruding. At this time the two chicks were running about in the grass. It was interesting to observe that at this early

age, only a few hours out of the shell, the young exhibited the peculiar habit of teetering the tail, which is characteristic of the adult, and which gains for them the common names, "Tip-up," and "Teeter-tail."

At 5:00 P. M. there was no change in the third egg, but the fourth was cracked at the large end. At 8:30 P. M. the third egg had not changed, but the fourth egg presented a small



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hole about three-eighths of an inch from the large end. At 9:30 P. M. there was no further change in either egg.

At 5:00 o'clock on the morning of the 14th the last two eggs had hatched, and there were three chicks in the nest, together with the two shells. These shells were complete except for a cap about five-eighths of an inch in diameter at the large end. The cap, which lay in the nest, was very cleanly cut from the rest of the shell.

At 9:00 A. M. the nest was empty.

At some time about the middle of July some members of the Laboratory brought in two of the chicks from Gull Point. They should have been returned to that place, but, instead, were liberated on the Sandspit. However, on July 24, five of the six young sandpipers which were now on the Sandspit were banded by Dr. Stephens and Dr. Lynds Jones. As a matter of interest and record the numbers of the bands may be here given as follows: 11522, 11523, 11524, 11525, 11526. The young birds were observed on the spit as late as July 29. It is hoped to continue the study of these birds during the summer of 1914.

The facts obtained in this study may be summarized as follows:

#### SUMMARY.

The incubation period would seem to be over seventeen days.

The old birds dispose of the egg shells partly by devouring.

Hatching seems to occur during the night.

The chicks leave the nest within five or six hours, but probably not much sooner unless disturbed.

It seems that the young birds are not fed by the parents at any time, but forage for themselves from the beginning.

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## THE RESIDENT BIRD LIFE OF THE BIG CYPRESS SWAMP REGION.

By F. M. PHELPS.

In the spring of 1913 I had the good fortune to be in Florida during the months of March and April and the early part of May. Of this time the latter half of March and nearly all of April were spent in the Big Cypress Swamp region of Lee County in the southwestern part of the State, and it is relative to its resident bird life that this paper has to deal, giving particular attention to the larger and more important species.